

# DTMA-UMTS-24-AISG

## Fullband Double Dual Duplex Tower Mounted Amplifier (Masthead Amplifier)

**KATHREIN**

Antennen · Electronic



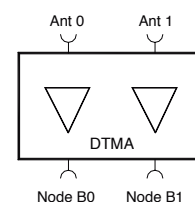
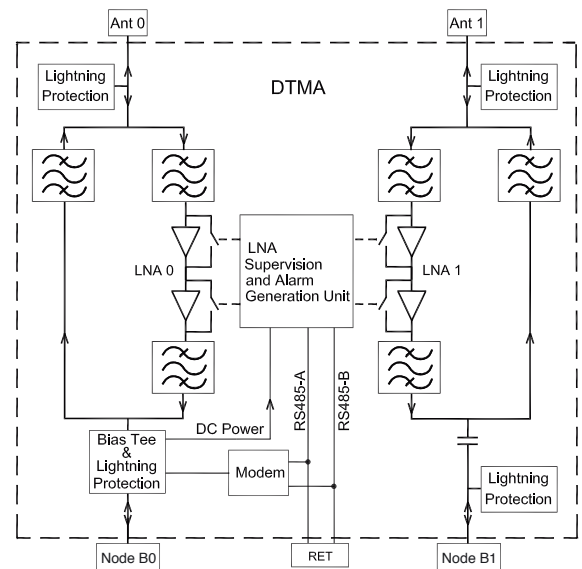
- Double unit for easy use with XPol antennas
- Supports AISG 1.1 or 2.0 (Default version AISG 1.1) \*
- Kathrein redundancy amplifier design for improved system reliability
- By-pass mode to ensure cell operation in case of DC power down
- Built-in lightning protection
- Compact size
- Suitable for antenna RET control according to AISG/3GPP standard
- **DTMA DC supply and AISG feed via Node B0 port for both TMAs**

**RET** = Remote Electrical Tilt  
**AISG** = Antenna Interface Standards Group

### Technical Data

Type No.	<b>782 10448</b> DTMA-UMTS-24-AISG (24 dB gain)
<b>Tx Characteristics</b>	
Frequency range	2110 – 2170 MHz
Bandwidth	60 MHz
Insertion loss	Typically 0.3 dB
Ripple	< ±0.2 dB
Input power	< 100 W (+50 dBm) CW < 1.6 kW (+62 dBm) Peak
Intermodulation products in Rx band	< -117 dBm (2 Tx carriers at +43 dBm)
Return loss	> 18 dB
<b>Rx Characteristics</b>	
Frequency range	1920 – 1980 MHz
Bandwidth	60 MHz
Loss in by-pass mode	Typically 2.4 dB (DC OFF)
Gain ripple	< ±0.3 dB
Return loss	> 18 dB (DC ON) > 12 dB (DC OFF)
Gain	24 ±1.0 dB 24 ±0.5 dB
-40 ... +65 °C	
+22 ... +28 °C	
Noise figure	Typically 1.4 dB
Output 1-dB compression point	> 20 dBm
3 <sup>rd</sup> order intercept point (OIP3)	> 29 dBm
<b>Environmental Characteristics</b>	
Operating temperature range	-40 ... +65 °C
IP rating	IP67 *
MTBF	> 1 000 000 hours (per TMA)
EMC	ETS 300 342-3
Lightning protection	5 kA, 8/20 µs RF connections and AISG port
<b>DC and Alarm Characteristics</b>	
<b>Through Node B0 Port only</b>	
DC supply without RET	9 – 30 V, minus grounded Typically 300 mA at 9 V Typically 100 mA at 30 V
Alarm management	According to AISG standard *
<b>Mechanical Characteristics</b>	
Material	Aluminium housing
Connectors	
RF	7-16 female
AISG Connector (Compliance AISG)	8-pin female, IEC 60130-9 * (Pin 6: 9 – 30 V DC, pin1: 9-15 V DC, pin 3: RS485B, pin 5: RS485A, pin 7: DC return; other pins: Not connected)
Mounting	Wall mounting: With 4 screws (max. 8 mm diameter) Mast mounting: With additional clamp set
Weight	5 kg
Packing size	262 mm x 502 mm x 214 mm
Dimensions (w x h x d)	166 mm x 262 mm x 77.5 mm (without connectors, without mounting brackets)

936.3115/a Subject to alteration.



\* see note on page 2



### Accessories (order separately)

Type No.	Clamp set suitable for mast diameter of
734 360	34 – 60 mm
734 361	60 – 80 mm
734 362	80 – 100 mm
734 363	100 – 120 mm
734 364	120 – 140 mm
<b>734 365</b>	<b>45 – 125 mm</b>



### Mounting Instructions

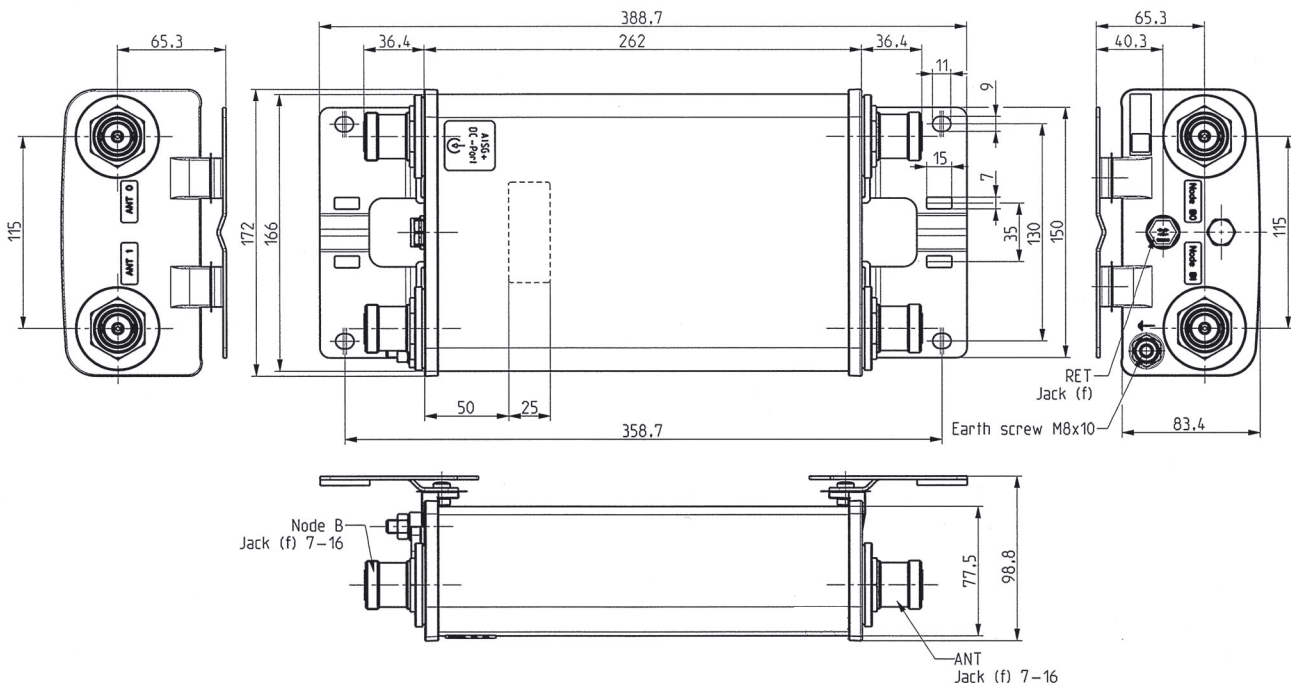
The coupling torque at 7-16 connectors is 25 – 30 Nm!

The tightening torque for fixing the AISG connector must be 0.5 – 1.0 Nm ('hand-tightened').

It is recommended to install the DTMA's with the antenna connectors pointing upwards and the BTS connectors pointing downwards.

In case of DTMA's with RET-connectors (Remote Electrical Tilt-connectors according to AISG Standard) it is **recommended** to mount the DTMA's in such a way that the RET-connector **always points downwards!**

A downward slanted mounting position between the vertical and horizontal plane is also allowed.



### Please note:

The protocol of the software interface can be switched between AISG 2.0 / 3 GPP and AISG 1.1 and vice versa with a vendor specific command (depending on default setting). If the primary station does not support the default setting, it has to be switched over before system start up. Please contact Kathrein for further information.

The DTMA is not designed for permanent operation under water.

Test conditions for the IP67 rating: submerge depth: 1 m; submerge time: 24 hours

As a result of more stringent legal regulations and judgements regarding product liability, we are obliged to point out certain risks that may arise when products are used under extraordinary operating conditions.

Extraordinary operating conditions, such as heavy icing or exceptional dynamic stress (e.g. strain caused by oscillating support structures), may result in the breakage of a mast mounted device or even cause it to fall to the ground.

These facts must be considered during the site planning process.

KATHREIN tower mounted amplifiers are designed to operate under the environmental conditions as described in ETS 300 019-1-4 class 4.1E and have passed environmental tests as specified in ETS 300 019-2-4.

The homogenous design of KATHREIN's tower mounted amplifiers use identical modules and materials.

Extensive tests have been performed on typical samples and models.

The installation team must be properly qualified and also be familiar with the relevant national safety regulations.

The details given on our data sheets have to be followed carefully when installing the antennas, filters, combiners, amplifiers and accessories.

The limits for the coupling torque of RF connectors, recommended by the connector manufacturers must be obeyed.

Any previous datasheet issues have now become invalid.

